MISSISSIPPI STATE DEPARTMENT OF HEALTH

Public Health Policy Brief
Mississippi State Department of Health
Immunization Program
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How changes in screening requirements of pregnant women can improve identification and prevention of Hepatitis B virus (HBV) in newborns in Mississippi.

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Key Messages:

- The most common cause of perinatal Hepatitis B virus (HBV) infection is through transmission from a pregnant patient with HBV to their infant upon delivery, and the newborn does not receive post exposure prophylaxis (PEP).
- HBV infection can occur with or without symptoms, however, 90% of newborns infected with HBV will develop a chronic HBV infection often resulting in liver damage, liver failure, liver cancer or death. It is estimated that 25% will die without identification and intervention.
- HBV infection can be identified in pregnant patients and infants with a confirmed positive hepatitis B surface antigen (HBsAg) test result thus screening of all pregnant women within their first trimester is recommended.
- Nationally, an estimated 95% of pregnant women receive prenatal HBsAg testing but fewer than half of the expected births to HBsAg-positive women are identified.
- The Mississippi State Department of Health's (MSDH) Perinatal Hepatitis B Prevention Program (PHBPP) recently identified cases of infant HBV positivity to mothers that tested HBsAg-negative during their first trimester of pregnancy, likely contributing to underreporting in our state.
- **Call to Action:** Implementation of a state-wide mandate that ensures all pregnant women in Mississippi are screened for HBsAg during their first trimester **and at delivery** for each pregnancy.

Background and Current Situation

The Perinatal Hepatitis B staff, housed within the Mississippi State Department of Health (MSDH) Immunizations Office, is charged with the management and implementation of the federally funded Perinatal Hepatitis B Prevention Program (PHBPP) at the state level for our 36 birthing

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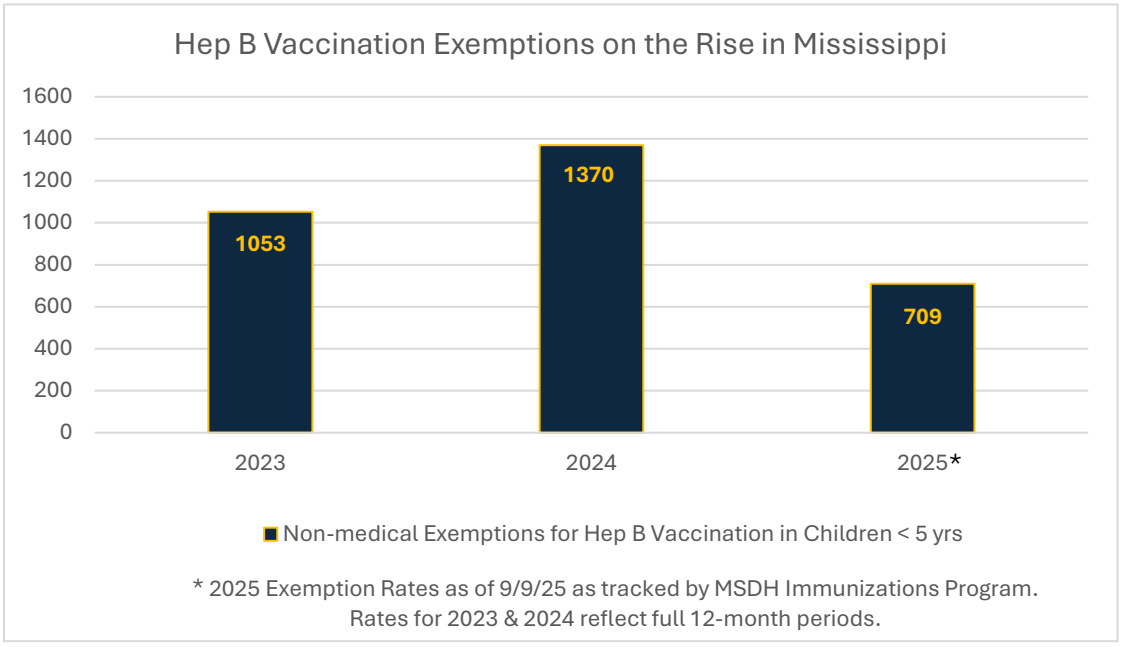
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centers. This program works, in partnership with providers, to improve prevention of mother-to-child transmission (MTCT) of the Hepatitis B virus (HBV) through the identification of hepatitis B surface antigen (HBsAG) positive pregnant women and in the case management of their infants.

Universal screening of pregnant women for HBV infection is the standard of care, and in many states, is supported by laws for screening and reporting these infections to public health agencies. Since 1991, the American College of Obstetricians and Gynecologists (ACOG), the American Academy of Pediatrics (AAP), and the Advisory Committee on Immunization Practices (ACIP) have recommended screening of all pregnant women for HBV. On September 19, 2025, ACIP voted again that all pregnant women be tested for HBV, further encouraging providers and health systems to increase the rates of testing in pregnancy. Requiring all pregnant women be screened for HBsAg in their first trimester, **and** upon delivery admission, could increase the number of women identified for prenatal intervention.

With refusal/declination and exemption rates for the hepatitis B vaccination on the rise (see Figure 1), adding the requirement to screen for HBsAg at delivery not only allows for improved identification of infants at risk for contracting HBV, but it also provides an opportunity for outreach and education regarding the benefits of the hepatitis B vaccine. Recently, ACIP tabled a vote with the potential to change recommendations for hepatitis B vaccination of infants. If a recommendation to delay hepatitis B vaccination for infants born to HBsAg-negative mothers is passed, then the importance of current and conclusive HBsAg lab results upon delivery increases exponentially as post-exposure prophylaxis (PEP) for HBV-exposed infants initiated within the first 12 hours after birth can be up to 95% effective. Requiring all pregnant women be screened for HBsAg in their first trimester, **and** upon delivery admission demonstrates a proactive effort on the part of MSDH in preparation for potential barriers to HBV identification and prevention, including vaccinations, while also providing a solution to underreporting in our state.

Figure 1:



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Problem Statement:

MSDH PHBPP has received recent cases of infant HBV positivity to mothers that tested HBsAg negative during the first trimester of pregnancy. These mothers were not screened again prior to delivery. On average, HBsAg results may be obtained within birthing centers in 40 minutes to 2 hours.

While an estimated 95% of pregnant women (nationally) receive HBsAg testing, fewer than half of the expected births to HBsAg-positive women are identified. MSDH Immunizations PHBPP staff have worked diligently to identify potential concerns that may be contributing to underreporting in our state. Provisions to increase the effectiveness of HBsAg screening of pregnant women in our state should be considered.

Recommendations & Conclusions

Screening requirements are an important tool for early identification of HBV infection in pregnant women and, consequently, an important tool in the prevention and identification of HBV infection in their infants. Screening and early intervention with targeted newborn prophylaxis can reduce HBV MTCT by >85%. The identification of pregnant women with HBV infection for PEP of their infants is crucial to preventing MTCT of HBV infection. As many as 25% of HBV infected infants will die prematurely from chronic liver disease. When identified and case managed by PHBPPs, the rates of chronic HBV infection among exposed infants who received post-vaccination testing was as low as 0.5% (CDC, unpublished data, 2014). MTCT of HBV is considered preventable.

We have seen an increase in syphilis nationally. Mississippi was not spared in this surge. We responded by screening for syphilis three (3) times during each pregnancy: at the onset of prenatal care, at 28 weeks gestation, and upon admission for delivery. As a result of this response, congenital syphilis cases in our state have decreased. Similarly, the potential for prenatal exposure to syphilis exists for HBV further supporting the value of pre-delivery screening for HBsAg. If undiagnosed, HBV transmission can lead to chronic infection in 90% of exposed infants. When PEP for HBV-exposed infants is initiated within 12 hours of birth, it prevents 95% of HBV infections via MTCT.

The Centers for Medicare and Medicaid Services (CMS) lists reimbursement for HBsAg testing (CPT 87340) at $10.33. Currently, with bundled reimbursements, this would be an additional cost to our birthing centers, but for less than the cost of the surgical gown and gloves used at delivery to protect staff, we can protect babies from this dreadful disease.

This call to action and support for implementation of a state-wide mandate, ensuring all pregnant women in Mississippi are screened for HBsAg during their first trimester **and at delivery** for each pregnancy, aligns with MSDH's goal of constructing a unique system of care for high-risk pregnant women and their babies throughout our state.

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Appendix A: Acronyms Defined

- AAP – American Academy of Pediatrics
- ACIP – Advisory Committee on Immunization Practices
- ACOG – American College of Obstetricians and Gynecologists
- CDC – Centers for Disease Control and Prevention
- CMS – Centers for Medicare and Medicaid Services
- HBsAg – Hepatitis B surface antigen
- HBV – Hepatitis B virus
- MSDH – Mississippi State Department of Health
- MTCT – Mother-to-child transmission
- PEP – Post-exposure prophylaxis
- PHBPP – Perinatal Hepatitis B Prevention Program

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